

DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH ADMINISTRATION

BUREAU OF PLANT INDUSTRY, SOILS, AND
AGRICULTURAL ENGINEERING

Division of Farm Machinery

OFFICE OF HEAD OF DIVISION

Organizes and directs the engineering re-
search activities of the Division dealing
with the determination and application of
basic principles governing the efficient
performance of farm machinery.

RECOMMENDED:

Robert M. Salter
Chief of Bureau

CONCURRED IN:

W. V. Lambert
Research Administrator

APPROVED:

J. H. Bess
Director of Personnel

DATE:

OCT 6 1947

PEST AND PLANT DISEASE CONTROL
MACHINERY

Develops equipment to control
insect pests and plant diseases
through cultural methods, mechan-
ical destruction, application of
liquid and dust insecticides and
fungicides from both ground ma-
chines and aircraft, and for the
application of steam, flame, and
other methods as may prove econom-
ically feasible.

FERTILIZER DISTRIBUTING
MACHINERY

Develops equipment and attachments,
as may be necessary, for the me-
chanical placement of commercial
fertilizers, in solid, liquid, or
gaseous form, at the optimum loca-
tion with respect to seed, seed
piece, or plant, to insure maximum
yield of crop consistent with main-
taining or improving its quality.

TILLAGE MACHINERY

Involves studies of basic prin-
ciples in soils manipulation
directed toward development of
more efficient tillage methods
and equipment. Includes equip-
ment for mulch culture - growing
crops with residue from previous
crops left on the soil surface.

WEED CONTROL MACHINERY

Develops equipment and attachments
for the effective control of weeds
through cultural practices and by
the application of herbicides,
flame, and other methods to be
determined.

SPECIALIZED CROP PRODUCTION AND HARVESTING MACHINERY

Secures fundamental information directed toward development of machinery and methods
which will aid in reducing labor requirements and costs for producing and harvesting
staple and specialty crops on both large and small farms:

1. Peanuts - Involves equipment for shelling seed peanuts; for producing and harvesting
the crop, including planting, digging, picking or combining; for curing the nuts; and
for handling the vines for hay.
2. Tung nuts - Includes development of orchard practices which will leave the soil sur-
face relatively level to facilitate gathering the fruit and promote tree growth, and of
equipment for gathering the nuts from the ground, hulling them, and drying the whole
fruit and nuts.
3. Sweetpotatoes - Relates to development of machinery and methods for planting slips or
seed pieces, cultivating, and harvesting and curing separately the vines and potatoes.
4. Sugar beets - Includes development of equipment for efficient planting of single germ
seed - segmented, decorticated, or natural; for cultivating and blocking; and for im-
provement of performance of sugar beet harvesters and loaders, with consideration of
handling the tops for stock feed.
5. Sugarcane - Involves development of equipment for planting seed cane, controlling
weeds, harvesting to effect selective topping, and removing cane trash mechanically and
chemically.
6. Cotton - Includes development, adaptation, or selection of equipment to mechanize
completely the production and harvesting of the cotton crop. Operations included are:
delinting the seed, planting, cultivating, chopping, and harvesting, including the use
of defoliant.

LOCATIONS OF FIELD WORK

PEST AND PLANT DISEASE CONTROL MACHINERY

Ohio, Toledo
Oregon, Portland

FERTILIZER DISTRIBUTING MACHINERY

Maryland, Beltsville

TILLAGE MACHINERY

Alabama, Auburn

WEED CONTROL MACHINERY

Iowa, Ames

SPECIALIZED CROP PRODUCTION
AND HARVESTING MACHINERY

Alabama, Auburn (Cotton, peanuts, tung nuts)
Colorado, Fort Collins (Sugar beets)
Georgia, Tifton (Peanuts)
Louisiana, Houma (Sugarcane)
Michigan, East Lansing (Sugar beets)
Mississippi, Stoneville (Cotton)
South Carolina, Clemson (Sweetpotatoes)
Texas, Lubbock (Cotton)

DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH ADMINISTRATION

BUREAU OF PLANT INDUSTRY, SOILS, AND
AGRICULTURAL ENGINEERING

Division of Farm Buildings and Rural Housing

OFFICE OF HEAD OF DIVISION

Organizes and directs the engineering research activities of the Division dealing with the determination and application of basic principles governing the design, construction, and operation of farm buildings of various kinds.

RECOMMENDED:

Robert M. Salter
Chief of Bureau

CONCURRED IN:

J. H. Gordon
Research Administrator

APPROVED:

J. M. Beas
Director of Personnel

DATE: NOV 28 1945

FARM HOUSING

Requirements incorporating efficiency, comfort, and convenience in the design of farm housing with special attention to structural adequacy, safety, correct installation of major equipment, good appearance and economy.

STRUCTURAL REQUIREMENTS

Determine loads on buildings due to wind, snow, weight and pressure of stored products or exerted by animals; study suitable and efficient use of materials and the application of pre-cutting, pre-fabrication, use of labor saving equipment to increase construction efficiency and lower building costs.

FARM AND HOME UTILITIES

Studies of use and efficiency of building and related equipment; of water supply, storage and purification for the farmstead and of the disposal of household, barn, and other wastes.

LIVESTOCK BUILDINGS

Determination of environmental, economic and convenience requirements of livestock and incorporating them in structures, having structural adequacy, and utilizing current and economical materials and equipment.

CROP AND PRODUCT STORAGE AND HANDLING

Developing buildings, equipment, and improved handling and applying improved methods for storage of grains, fruits, vegetables, and hay. (1) Cooperating in determination of environmental requirements; (2) providing proper storage and handling conditions; (3) planning practical and economical buildings, and storage methods.

PLAN EXCHANGE AND INFORMATION

Collaborates with sections in developing building designs that incorporate research findings; cooperates with state agricultural colleges and industry in selection and distribution of building plans best suited for regional use.

LOCATIONS OF FIELD WORK:

LIVESTOCK BUILDINGS

California, Davis
Maryland, Beltsville
Missouri, Columbia

STRUCTURAL REQUIREMENTS

Iowa, Ames

CROP AND PRODUCT STORAGE AND HANDLING

Colorado, Ft. Collins
Georgia, Athens
Illinois, Urbana
Iowa, Ames
Kansas, Hutchinson
Kansas, Manhattan
Maryland, College Park
Virginia, Blacksburg
Washington, Wenatchee

DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH ADMINISTRATION

BUREAU OF PLANT INDUSTRY, SOILS, AND
AGRICULTURAL ENGINEERING

Division of Mechanical Processing of Farm Products

OFFICE OF HEAD OF DIVISION

Organizes and directs the engineering research activities of the Division dealing with the development and improvement of machinery and methods for the primary processing of farm products.

RECOMMENDED:

Robert M. Salter
Chief of Bureau

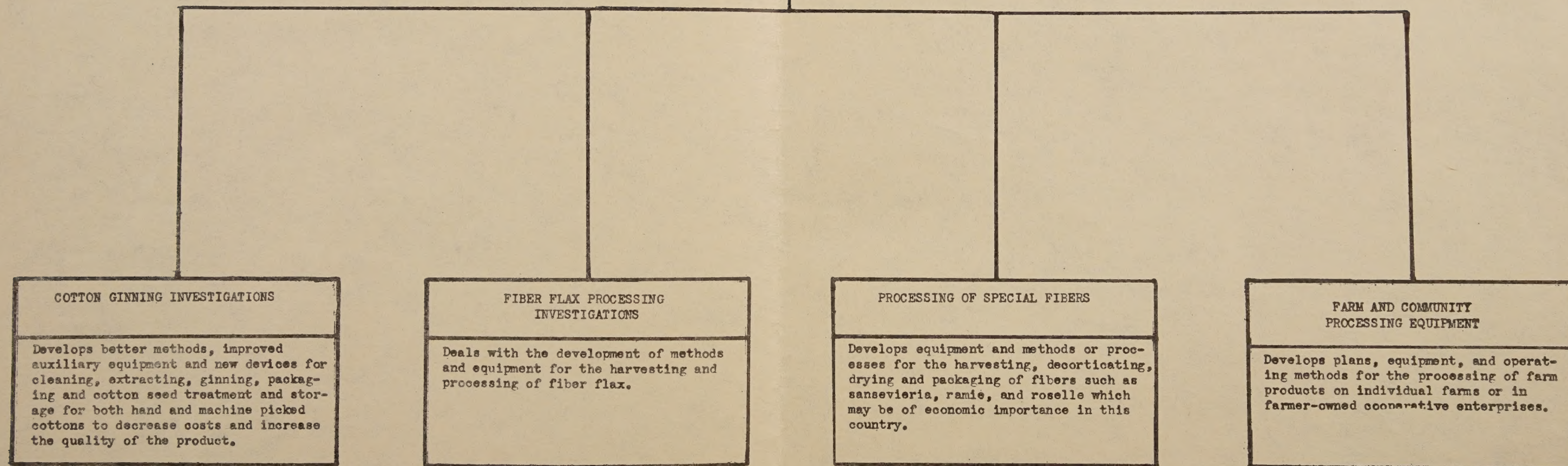
CONCURRED IN:

W. H. Anderson
Research Administrator

APPROVED:

W. H. Anderson
Director of Personnel

DATE: NOV 28 1945



LOCATIONS OF FIELD WORK

COTTON GINNING INVESTIGATIONS

Mississippi, Stoneville

FIBER FLAX PROCESSING INVESTIGATIONS

Oregon, Corvallis

PROCESSING OF SPECIAL FIBERS

Florida, Belle Glade
Florida, Boynton

FARM AND COMMUNITY PROCESSING EQUIPMENT

Maryland, Beltsville

